

## WHAT IS CLAIMED IS:

1. A pump (1; 60; 90) for mounting on a receptacle (3),  
the pump comprising:

- a pump body (14; 65; 101);

5 - a moving assembly (5; 62; 91) that is movable relative to the pump body and that co-operates therewith to define a pump chamber of variable volume, the pump chamber being suitable for communicating with the inside of the receptacle via at least one opening (18; 88) of the pump body disposed in such a manner as to enable the pump to operate in a head-down position;

wherein the pump comprises:

- an air intake passage (42; 85) formed between the pump body and the moving assembly and capable of communicating with the opening (18; 88) of the pump body;

15 - a first lip (40; 80; 119) arranged, after the moving assembly has moved away from a rest position in the substance-dispensing direction, to press in leaktight manner against the pump body and prevent communication between the inside of the receptacle and the pump chamber (6) via the opening (18; 88); and

20 - a second lip (41; 81; 122) situated above the first lip when the pump is observed in the head-up position, said second lip (41; 81; 122) being arranged to close the air intake passage (42; 85) when the moving assembly is in its rest position and to release said passage when the moving assembly (5; 62, 91) is displaced in the substance-dispensing direction.

30 2. A pump according to the preceding claim, wherein each of the first (40; 80; 119) and second (41; 81; 122) lips is substantially frustoconical in shape, flaring towards the pump chamber (6).

35 3. A pump according to the preceding claims, wherein the moving assembly includes a third lip (45) disposed so as to press against the pump body to close the air intake

passage (42) when the moving assembly is at the end of its substance-dispensing stroke.

4. A pump according to one of claims 1 and 2, wherein the  
5 pump body and the second lip (81; 122) are arranged in such a manner as to close the air intake passage (42; 85) when the moving assembly is at the end of its substance-dispensing stroke.

10 5. A pump according to the preceding claim, wherein the pump body includes a setback (85) situated between two regions (83, 84) against which the second lip (81; 122) presses while the moving assembly occupies respectively a rest position and an end-of-stroke position, said setback  
15 providing communication between said regions while the moving assembly is occupying an intermediate position between its rest and end-of-stroke positions.

20 6. A pump according to any one of the preceding claims, wherein the moving assembly comprises a pushbutton (30; 67; 93) and an insert (31; 68; 94) fitted thereto, the pushbutton and the insert being arranged together to define a passage (38; 97) for delivering the substance, at least while the pump is actuated to dispense the substance.  
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7. A pump according to the preceding claim and to claim 3, wherein the first (40; 80; 119), second (41; 81; 122), and third (45) lips are made on the insert (31; 68; 94).  
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8. A pump according to one of claims 6 to 7, wherein the pushbutton comprises two portions (32, 36; 69, 71), one (32; 69) of which is stationary relative to the insert (31), and the other one (36) of which is movable relative thereto.  
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9. A pump according to the preceding claim, wherein the movable portion (36; 71) of the pushbutton and the insert (31; 68) include respective surfaces suitable for co-operating to close the passage for delivering the substance while the moving assembly is in its rest position and for opening said passage once the movable portion (36; 71) has moved through a determined distance relative to the stationary portion (32; 69).

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10. A pump according to the preceding claim, wherein the pushbutton (30; 67) is arranged so that the movable portion (36; 71) can move relative to the insert (31; 68) through said determined distance from its rest position only once the force exerted on the pushbutton exceeds a threshold.

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11. A pump according to any one of claim 8 to 10, wherein the stationary portion (32; 69) and the movable portion (36; 71) of the pushbutton (30; 67) are interconnected by a web (37; 72) of elastically-deformable material.

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12. A pump according to the preceding claim, wherein the web of material is annular in shape.

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13. A pump according to any one of the preceding claims, including a resilient return element (49; 49') suitable for returning the moving assembly into its rest position.

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14. A pump according to the preceding claim, wherein the resilient return element is disposed outside the pump chamber.

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15. A pump according to one of claims 12 to 13, wherein the resilient return element comprises a helical spring working in compression.

16. A pump according to any one of claims 13 to 15, wherein the resilient return element is made integrally with the pushbutton (30).

5 17. A pump according to any one of the preceding claims, wherein the pump body (14; 65; 101) is arranged to enable a dip tube (24) to be fastened.

10 18. A pump according to the preceding claim, including a check valve (20, 21) that closes while the volume of the pump chamber (6) is decreasing and that opens while the volume of the pump chamber is increasing, said check valve being disposed in such a manner as to enable the pump chamber to be fed with substance by means of the dip tube (24).

15 19. A pump according to any one of the preceding claims, in which the moving assembly includes a delivery orifice (70), wherein the delivery orifice (70) is situated on the side opposite from the opening (88) about the axis (X) of the pump.

20 20. A pump according to any one of the preceding claims, wherein the volume of the pump chamber (6) in the rest position is greater than the volume of a quantity or "dose" of substance to be dispensed.

25 21. A pump according to one of claims 6 and 7 and one of claims 13 to 20, wherein the pushbutton (93) is entirely stationary relative to the insert (94).

30 22. A pump according to the preceding claim, wherein the insert (94) includes a skirt (99) suitable for co-operating in leaktight manner with a spike (100) of the pump body (101) when the pump is at rest, in such a manner as to isolate the pump chamber from the outside.

23. A pump according to one of claims 21 to 22, wherein  
the insert (94) includes a valve member (105) suitable  
for closing a top opening (115) of the skirt (99) while  
the volume of the pump chamber is increasing and for  
5 enabling substance to flow therethrough while the volume  
of the pump chamber is decreasing.

24. A pump according to the preceding claim, wherein,  
before first use of the pump (90), the valve member (105)  
10 is housed entirely inside the skirt (99).

25. A pump according to the preceding claim, wherein the  
valve member (105) includes a conical recess (106)  
suitable for co-operating with a conical portion (107) of  
15 the spike (100).

26. A receptacle fitted with a pump according to any one  
of the preceding claims.